

**PROTECTED ACTIVE METAL ELECTRODE AND BATTERY CELL
STRUCTURES WITH NON-AQUEOUS INTERLAYER ARCHITECTURE**

ABSTRACT OF THE DISCLOSURE

Active metal and active metal intercalation electrode structures and battery cells having ionically conductive protective architecture including an active metal (e.g., lithium) conductive impervious layer separated from the electrode (anode) by a porous separator impregnated with a non-aqueous electrolyte (anolyte). This protective architecture prevents the active metal from deleterious reaction with the environment on the other (cathode) side of the impervious layer, which may include aqueous or non-aqueous liquid electrolytes (catholytes) and/or a variety electrochemically active materials, including liquid, solid and gaseous oxidizers. Safety additives and designs that facilitate manufacture are also provided.

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